



Fiscal Year 2007

Remediation Division Annual Report

July 1, 2006 – June 30, 2007

It is the mission of the Montana Department of Environmental Quality to protect, sustain and improve a clean and healthful environment to benefit present and future generations.

It is the mission of the Remediation Division to protect human health and the environment by preventing exposure to contaminants released to soil or water, and to oversee compliance with state and federal laws and regulations.

Remediation Division

Purpose: The Remediation Division is one of four divisions under the Montana Department of Environmental Quality (DEQ). The Division is responsible for overseeing investigation and cleanup activities at state and federal Superfund sites; reclaiming abandoned mine lands; implementing corrective actions at sites with leaking underground storage tanks (LUSTs); and overseeing groundwater remediation at sites where agricultural and industrial chemical spills have caused groundwater contamination. The purpose of these activities is to protect human health and the environment; to prevent exposure of potential human and ecological receptors to hazardous or deleterious substances that have been released to soil, sediment, surface water, or groundwater; and to ensure compliance with applicable state and federal regulations.

The Mine Waste Cleanup and Hazardous Waste Site Cleanup Bureaus and their respective sections and programs that facilitate site cleanup comprise part of the Remediation Division. Program staff includes bureau chiefs, section supervisors, environmental science specialists, reclamation specialists, and other program staff. The Division Administrator oversees and assures program administration. The Division Administrator's Office includes office manager and administrative professional staff, fiscal officer and staff, and information officer.

Mine Waste Cleanup Bureau

Abandoned Mines Section

Purpose: Montana's Abandoned Mined Land Reclamation (AML) Program within the Department of Environmental Quality (DEQ) is responsible for cleanup and reclamation of historic (pre-1977) mining-related disturbances. In effect since 1980, Montana's AML Program is regulated by federal and state statutes, and by Montana's Approved Abandoned Mine Reclamation State Plan published at 30 CFR Part 926.

In recent years Montana has been receiving approximately \$3.2 million in federal grants to fund cleanup and closure at mine sites where there is no continuing reclamation responsibility under federal or state laws. On December 9, 2006, the 109th Congress passed the Surface Mining Control and Reclamation Act of 2006 as part of the Tax Relief and Health Care Act of 2006 (H.R. 6111). This new legislation extends AML fee collection

authority for an additional 15 years and increases the dollar value of the AML grant Montana receives. Beginning in State Fiscal Year (SFY) 2008, Montana's AML grant will total approximately \$8.1 million dollars. The Abandoned Mines Section is working to understand the changes in the laws and regulations governing the AML program and is assessing what changes may be needed to effectively commit these anticipated increased funds towards on the ground reclamation. Federal regulations governing the extension of the AML program are scheduled for publication during 2008.

Program Highlights

The Abandoned Mines Section of the Mine Waste Cleanup Bureau implements the AML Program. The Section completed reclamation at the Washington, Bluebird, Big Chief, and the Belle Lode Mines in Jefferson County. The Section capped and closed out construction at the Leach Pad #1 at the Basin Creek Mine which had been developed as a regional mine waste repository for wastes from the Argentine, Ontario, and Blue Bird Mine Reclamation Projects, Jefferson County.

The Section also began "year one" construction on the Snowshoe Mine in Lincoln County. Snowshoe is a mine reclamation construction project with a three year construction schedule. The Section started construction on the Trail Creek Coal Mitigation Project, Park and Gallatin Counties. It worked with the U.S. Department of the Interior, Bureau of Land Management (BLM) on an agreement to expand and incorporate additional mine wastes into the Bald Butte Mine Reclamation Project, Lewis and Clark County, and prepared bid documents and specifications for bidding on this project. The Section completed engineering assessment for operational functionality at eight mine waste repositories completed by the Abandoned Mines Section since 1996. It worked with BLM to develop a draft Memorandum of Agreement for use of Wickes mine waste repository to dispose of wastes from Frohner Mine Reclamation Project, Jefferson County. This Agreement, when implemented, will allow the Frohner Mine Reclamation Project to move forward.

The Section continued work on the Belt Coal Mine Acid Mine Drainage Control Project, Cascade County. It reopened Anaconda Coal Mine to gain access to the underground workings for purposes of evaluating design of an underground bulkhead system for source control of acid mine drainage. The Section continued work with the United States Environmental Protection Agency (EPA) and United States Department of Justice to acquire mine waste repository property including the McLaren Tailings and adjacent ground in Park County. The Section received authority from the Montana Board of Environmental Review (BER) to acquire a repository site for McLaren Tailings mine reclamation project. The Section continued work on the Toston Smelter Mine Reclamation Project in Broadwater County.

Construction Services Section

Purpose: The Construction Services Section of the Mine Waste Cleanup Bureau is responsible for the remedial cleanup of twenty-two miles of Silver Bow Creek extending from Butte to the Warm Springs Ponds. Funding for the project is from a cash-out Settlement with Atlantic Richfield Corporation. The Department is the lead agency for the project and conducts operations with oversight provided by the EPA.

Approximately seventy-seven percent of the four and a half million cubic yards of historic mine related contaminants have been removed from the site. Thirty –five percent of the stream channel has been reconstructed. Revegetation efforts as well as operation and maintenance activities are ongoing. Wildlife is becoming abundant in newly reclaimed areas.

Construction Services Section personnel, in cooperation with DEQ legal staff participated in confidential settlement discussions with the EPA, U.S. Department of Justice and federal trustees, and the Montana Natural Resource Damage Program (NRDP) on a draft Consent Decree (CD) and Superfund Memorandum of Agreement (SMOA) to implement a State-lead combined remedy / restoration cash-out settlement with Atlantic Richfield for the remedial clean up of the Clark Fork River. If successfully concluded, the Construction

Services Section will be responsible for the design and remedial construction of forty-three miles of stream bank and associated flood plain extending from the Warm Springs Ponds to areas west of Garrison Junction.

Federal Superfund Section

Purpose: The Federal Superfund Section of the Mine Waste Cleanup Bureau is responsible for administering remedial cleanup activities, in consultation with EPA, at federal Superfund sites in Montana. The Montana Pole National Priority List (NPL) site and the Troy Operable Unit of the Libby Asbestos NPL Site are sites led by DEQ, resulting in DEQ being responsible for initiating and conducting remedial activities in consultation with EPA.

In 2007, a major investigation of asbestos contamination in Troy was begun under DEQ leadership. DEQ established a Troy field office to meet the on-site needs of the community, hired a contractor, and wrote and received EPA approval for the work plan. In April 2007, DEQ began field investigations to identify community cleanup needs. Concurrently, investigations and removals continued in Libby under EPA leadership.

Work was completed at the Anaconda Smelter site on Community Soils, Old Works, and Regional Water Waste and Soils projects. The Section conducted residential yard replacements, attic and yard sampling, remediation of commercial/industrial properties, initiated activities to minimize blowing dust concerns, and conducted surface and groundwater investigations.

The Section continued remediation of groundwater and soil at Montana Pole and Silver Bow Creek/Butte. Operations and maintenance were continued at Libby Groundwater, Idaho Pole and Silver Bow Creek/Butte. Groundwater monitoring continued at Lockwood Solvent Ground Water Plume and Silver Bow Creek/Butte. Ongoing development of institutional controls took place at the Anaconda, Carpenter Snow and East Helena sites with EPA and the appropriate county. Five year reviews were completed at the Basin Mining Area and Moutat. The Section conducted or participated in public meetings for Burlington Northern (BN) Somers and East Helena Asarco. The Section commented on the draft Record of Decision (ROD) for the Carpenter/Snow Creek Mining District Town of Neihart Operable Unit, and participated in the development of a ROD Modification for Silver Bow Creek/Butte.

Progress was made on bankruptcy agreements in the Barker/Hughesville Mining District, and with cash-out settlement discussions with EPA, state and federal trustees, and reviewing and commenting on draft consent decree documents on the Clark Fork River Operating Unit (OU) and Milltown Reservoir Sediments OU.

Hazardous Waste Site Cleanup Bureau

Tank Cleanup Program

Purpose: The Petroleum Release Section was restructured in 2007 into two separate sections: the Petroleum Technical Services Section (PTS) and the LUST Brownfields Section (LBS). The newly formed PTS will focus its cleanup and enforcement efforts at petroleum release sites administered under the Petroleum Storage Tank Cleanup Act (PSTCA). As the Petroleum Tank Release Cleanup Fund (PTRCF) undergoes funding changes, this specialization will allow DEQ to more quickly and efficiently adapt. The LBS will focus its efforts on federally-funded cleanup work, and cleanup at federally-owned sites and brownfields cleanups.

The technical staffs of both sections implement corrective action required by the Montana Underground Storage Tank Act. They oversee, require, and sometimes perform the investigation and cleanup of sites contaminated by releases of regulated substances from underground storage tanks. The universe of owners and operators consists

of federal, state and local governments, schools, hospitals, railroads, service stations, utilities, convenience stores, farms, and other industrial and commercial enterprises.

Joint LBS-PTS Section Accomplishments

The LBS and PTS Sections jointly accomplished a number of activities. The sections jointly updated numerous standardized letters used by both staffs to expedite basic project management communication and response to owner/operators and their consultants. Streamlining efforts such as this have decreased correspondence response time allowing for more rapid response to inquiries and concerns from owner/operators, consultants, and the public. The sections updated Guidance on Groundwater Sampling Methodologies, and Surveying Requirements and posted them on the DEQ webpage.

The sections revised the 30-day release form to comply with the 2005 Energy Policy Act. They conducted technical review and completed risk-based (RBCA) closures at 52 Leaking Underground Storage Tank sites. The sections jointly adopted new DEQ-7 standards for groundwater, reduced monitoring requirements at 240 sites that were placed in a long-term monitoring status using the EPA Monitored Natural Attenuation (MNA) Protocol, and they provided articles for the DEQ publication, *MUST News*, on numerous topics including groundwater monitoring, new analytical standards, and new Risk-Based Corrective Action (RBCA) standards.

Revised Site Priority Ranking System

The site priority ranking system was significantly updated to better manage DEQ workload and to better support the Petroleum Tank Release Compensation Board's (PTRCB's) fund obligation decisions. This will allow the fund to determine which sites are obligated to receive funding. Like the old system, the new system focuses on risk to human health and the environment, but significant risk to any key receptor, pathway, or factor will elevate site priority. The staff continues to refine the prioritization system as it re-ranks active petroleum release sites using the new system. DEQ staff presented the updates prioritization system at PTRCB meetings and with the consulting community.

Streamline Monitoring Requirements for Tank Cleanups

The process for managing release sites where active cleanup is complete and only groundwater monitoring is left to ensure cleanup standards are met has also been streamlined. DEQ classifies these sites as Groundwater Management (GWM) sites using the U.S. EPA Monitored Natural Attenuation (MNA) Protocol. Under the regulatory oversight of a specialized project manager, the DEQ anticipates that it can provide expedited response times, and ensure that standardized sampling protocols (e.g., frequency, number of samples, and type of analyses) are being applied uniformly state-wide, resulting in a cost-savings to the Fund.

Updated Risk-Based Corrective Action

DEQ adopted higher concentrations for risk-based screening levels (RBSLs) for certain petroleum constituents where newly available scientific data indicated these concentrations were appropriate. These changes are published in the updated Risk Based Corrective Action (RBCA) guidance that was adopted into rule in December 2007. As a result there has been a reduction in the number of confirmed and suspected releases being identified. Additionally the scope of investigations can be reduced and closure of sites can be accelerated, resulting in reduced cleanup costs at individual sites.

Petroleum Release Statistics

In 2007, 56 petroleum releases were confirmed and 52 petroleum releases were closed.

LBS Accomplishments

The LUST Trust Program initiated contracted services totaling \$506,908, which enabled the department to conduct underground site investigation, remediation and removal of underground storage tanks at four sites, some with prolonged enforcement histories.

A LUST Trust grant of \$279,000 funded a Phase II Electrical Resistance Heating (ERH) Project for the Ronan LUST Trust site. The project is addressing the substantial residual source area that remains at the site. The project was implemented in 2007 and was scheduled for completion during 2008. At the Ronan site, the LUST Trust Program in association with the University of Montana (UM) Geology Department completed a research project that sought to better define subsurface contaminant conditions.

In cost recovery efforts, LBS recovered approximately \$40,000 through legal cost recovery mechanisms.

The program also implemented a horizontal drilling approach at the Columbus Town Pump site, which is considered innovative. Horizontal drilling is common oil field technology, but has been introduced at tank sites only recently.

PTS Accomplishments

The PTS Section conducted successful source area removal projects at Malfunction Junction Sinclair, Helena, and Michael's Exxon, Kalispell. At Malfunction Junction Sinclair, Helena, highly contaminated source material was removed and the site was successfully sold. The property is now occupied by a retail business. At Michael's Exxon, Kalispell, a large amount of saturated source material and free product gasoline was removed as part of the Michael's emergency response action, which was conducted to address the release in July 2007. An approximate release of 10,000 gallons necessitated emergency response from the State, the City of Kalispell, and environmental contractors representing Michael's Exxon.

Site closures were identified by EPA as the greatest priority for state programs in 2006. Emphasis on this aspect of the program continued through 2007. Staff at the Kalispell Field Office submitted 11 closures and 32 potential closures for review.

Highlights of ongoing work include: Impacted soil (3,800 cubic yards) removed from Cenex Farm and Home in Kalispell and recycled as asphalt hot batch base material. Soil (1,741 cubic yards) was removed from the Big Arm Store and recycled as above. Soil (4,331 cubic yards) was removed from Big Mountain Tire Whitefish and transported to Allied Waste. Soil (3,535 cubic yards) was removed from Heritage Bank, Whitefish and land farmed. Field Office staff also worked successfully with Olympus Environmental Consulting to address gasoline seepage along the Whitefish River in Whitefish, MT.

Staff at the Billings Field Office completed approximately 12 source area removals, addressed 22 suspected and confirmed releases, successfully closed 8 sites, re-activated work at numerous dormant sites, and completed 25 site visits to assist with abatement efforts at the Columbus LUST Trust site. Field Office staff completed significant work on the UST Fields project along 1st Avenue South in Billings.

Site Response Section

Purpose: The Site Response Section (SRS) utilizes the Comprehensive Environmental Cleanup and Responsibility Act (CECRA) and the Water Quality Act (WQA) to investigate and clean up hazardous substances at sites not addressed by the federal Superfund program. Historical waste-disposal activities and spills at these sites caused contamination of air, surface water, groundwater, sediments, and/or soils with hazardous or deleterious substances. Under CECRA, sites are ranked based on potential risks to human health and the environment.

Because staff and financial resources are insufficient to address the 211 contaminated sites listed in Montana, CECRA activities focus primarily on 37 of the 57 maximum- and high-priority sites on the list. Currently shortfalls in the Resource Indemnity Trust interest income have resulted in shortfalls in the funding to Environmental Quality Protection Fund (EQPF), preventing the program from being fully staffed. In addition

to routine reviews and approvals conducted, the Site Response Section completed significant major actions at several of the state's high and maximum priority sites.

Significant progress occurred at the BN Livingston facility. In April 2006, the DEQ stopped negotiating with BNSF Railway on how to implement cleanup of the BN Livingston Shop Complex facility described in the 2001 Record of Decision. In 2007, BNSF implemented DEQ approved work, including installation of the free product recovery system.

The DEQ met the schedule for completion of the remedial investigation at Kalispell Pole and Timber, Reliance Refinery, and Yale Oil Corporation facilities in compliance with legislation enacted in 2005. To accomplish this, staff conducted remedial investigation field work in summer 2006, and drafted the Remedial Investigation Report and placed the Draft Final Report for public comment at the end of January 2007.

The DEQ reached an interim settlement agreement in the Kalispell Pole and Timber, Reliance Refinery, and Yale Oil Corporation litigation with one party, which resulted in \$295,000 applied to outstanding past costs.

The DEQ reached an interim settlement agreement in the Miles City Rail Yard litigation, recovering a significant amount of past costs and setting the stage for the completion of a feasibility study that will define options for long-term cleanup.

Preliminary results from a September 2007 vapor intrusion investigation at the Bozeman Solvent Site (former dry cleaner location) confirmed the presence of tetrachloroethene (PCE) vapors exceeding screening levels beneath the slab and inside the Hastings Bookstore and CVS Pharmacy. DEQ is currently reviewing the vapor intrusion investigation report and evaluating what additional investigation will be required.

In August 2007, DEQ launched a remedial investigation to identify the area of contamination on non-United States Forest Service lands at the Mike Horse Dam and the Upper Blackfoot Mining Complex. The DEQ investigation is being funded with a \$2 million dollar appropriation from the 2007 Legislative Session.

At the CMC Asbestos Bozeman CECRA site, DEQ approved a City of Bozeman Supplemental Investigation work plan on December 6, 2007 and Tetra Tech, Inc. (contractor for the City of Bozeman) completed field work under the plan on December 31, 2007. Remedial work is expected in late 2008.

Considerable resources were spent responding to the Asarco bankruptcy litigation, defending DEQ's claims, and participating in mandatory mediation. Negotiations are still ongoing.

Low and medium-priority sites, and sites not on the CECRA Priority List, are typically addressed through the Voluntary Cleanup and Redevelopment Act (VCRA) and 3 voluntary cleanup plans were submitted to SRS for review in 2007.

Database and Website

The SRS Section completely restructured the SRS and State Superfund database to support ease of project management for project officers and REM managers. The Section created a new project time tracking feature that allows staff to manage their daily time log, track project time, and do all reporting electronically. This will save significant time and create an electronic record to support recovering costs from potentially liable persons.

SRS updated and expanded the Site Response Section and State Superfund website to facilitate members of the public, local governments, and other state and regulatory agencies retrieving programmatic and site-specific data. Interested parties may conduct self-service data retrieval without remediation staff assistance. It is also expected to provide more meaningful data to the public.

The SRS groundwater program identified and sent Water Quality Act (WQA) notice letters at 7 new sites and closed 8 existing sites.

Brownfields Programs

Purpose: Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off undeveloped, open land and improves and protects the environment.

The Remediation Division's Brownfields Program is supported in both the LBS and SRS. Both sections have brownfields coordinators who maintain information about brownfields in Montana and assist communities in redevelopment of blighted properties.

In 2007, the division's Brownfields Program received \$976,426 in grant funding to establish and enhance its state response programs. The brownfields coordinators for these programs work closely together to provide outreach and technical guidance to communities that are actively working toward revitalization of brownfields. Contracted services were used to support these goals.

Brownfields accomplishments this year included: Working on targeted brownfields assessments: David Post Yard, Willow Creek; and Berg Lumber Mill, Lewistown; Shelby Refinery, Shelby; publishing the second year of a semi-annual newsletter, *The Outreach*, in coordination with Permitting and Compliance Division's Hazardous Waste Section and the department's publications staff; drafting eight acknowledgement letters for applications for competitive EPA assessment grants, revolving loan funds, and cleanup grants; conducting one Phase I preliminary assessment: Kalispell Feed & Grain, Kalispell; participating on the Lewis & Clark County brownfields task force; assisting Flathead County with drafting a successful application for an EPA targeted brownfields assessment at Kalispell Feed & Grain, Kalispell; and applying successfully to EPA for a partial targeted brownfields assessment at Berg Lumber Mill.

Fiscal and Administrative Services

During FY 2007, the workgroup, Fiscal and Administrative Services, was reorganized into two sections, Fiscal Services and Administrative Services.

Fiscal Services

Purpose: Fiscal Services managed 12 consultant contracts, agreements with other state agencies and counties throughout the state, and task orders under these contracts and agreements. In addition, the fiscal staff, shifting from quarterly to monthly billing, sent out a total of 227 invoices for reimbursement of costs incurred by the division. This resulted in cost recovery of \$3,093,626.

The Remediation Division continues to manage cooperative agreements with EPA for various superfund and groundwater cleanup activities and the cooperative agreement with the Office of Surface Mining for the abandoned mine activities. Monthly Budget Status Reports (BSRs) were completed to assist program managers with budget management in all programs and fiscal staff prepared applications and semiannual and quarterly reports for the federal agreements.

Administrative Professionals Team

Purpose: The Administrative Professionals Team (APT) provides specific and general support to Hazardous Waste Site Cleanup Bureau personnel and the Mine Waste Cleanup Bureau using knowledge of office practices; state, department and division programs; technical terminology; computer hardware and software; and a variety of policies and procedures. This staff is responsible for tasks associated with payroll, travel arrangements and reimbursements, document production, filing system maintenance, database maintenance, information dissemination, and other general administrative and clerical support.

2007 presented the APT staff with significant opportunities, including the loss of staff, which eventually resulted in full staffing. The second opportunity was reorganization of the Fiscal and Administrative Services Section. The third major opportunity of the year was the building remodeling. This affected all employees in the Last Chance Gulch building, which houses the Remediation Division. Cooperation and communication were the keys to successfully accomplishing this enormous undertaking.

Other work Accomplishments included piloting records management procedures, updating desk manuals, creating records inventory and cross-training of staff.

Remediation Division Indicators – July 1, 2006 to June 30, 2007

Indicator	Actual	Actual	Actual	Actual	Actual	Actual	Estimated	Estimated
(Fiscal Year)	2002	2003	2004	2005	2006	2007	2008	2009
Active Sites	1,220	1,284	1,294	1,520	1,544	1,893	895	897
Inactive Sites	546	4,862	4,929	4,803	4,808	7,417	8,196	8,188
Site Activities	281	350	280	2,155	2,579	737	698	671
Sites Closed/Delisted	64	91	75	53	56	68	69	68
Cost Recovery Invoices	61	71	75	87	153	227	365	365
Costs Recovered	\$429,933	\$470,199	\$787,325	\$905,682	\$1,643,902	\$3,093,626	\$2,535,000	\$2,535,000
Contracts	122	116	149	195	196	12	11	11
Contract Costs	\$4,788,074	\$5,529,896	\$4,964,575	\$15,651,809	\$21,585,592	\$16,958,330	\$22,001,804	\$19,797,000
Public Comment Periods	23	25	27	42	44	13	15	3
Public Meetings	2	5	10	22	19	14	28	8

